

Environmental Assessment (EA) DOI-BLM-WY-070-EA14-250

Lease Renewal

**Claypit/#02398
Milton Moffett Ranch
Lease # 4907667**

**E.K. Mountain/#12200
Raymond & Joyce Taylor
Lease # 4907327**

**Kaycee L and L/#12148
Kaycee Land & Livestock
Lease # 4907238**

**Keyes Draw/#02277
William & Bonnie Ross
Lease # 4907476**

**School Sec Dr/MDLFRK/#22122
Cydney Long & Stuart Gosney
Lease # 4907199**

**Trough Draw/#12043
Milton Moffett
Lease # 4907192**

Preparer: Dustin Kavitz-BLM Rangeland Management Specialists

Bureau of Land Management
Buffalo Field Office
1425 Fort Street
Buffalo, WY 82834

Wyoming High Plains District - Buffalo Field Office



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The BLM's multiple-use mission is to sustain the health and productivity of the public lands for the use and enjoyment of present and future generations. The Bureau accomplishes this by managing such activities as outdoor recreation, livestock grazing, mineral development, and energy production, and by conserving natural, historical, cultural, and other resources on public lands.

1.0 INTRODUCTION

1.1 Background

The Bureau of Land Management (BLM), Buffalo Field Office (BFO) proposes to renew 10 year grazing leases for the following 6 allotments: Claypit (#02398), E.K. Mountain (#12200), Kaycee Land L (#12148), Keyes Draw (#02277), School Sec Dr/MDLFRK (#22122), and Trough Draw (#12043). Kaycee Land L allotment will be renamed to the Flynn Draw allotment and the School Sec Dr/MDLFRK allotment will be renamed School Section Draw allotment. The allotments are in close proximity to one another in Johnson County, Wyoming within 11 miles of Kaycee, Wyoming. All the allotments are in the Powder-Tongue watershed. Elevations are from 4,700 feet to 6,300 feet. The allotments contain about 15,975 total acres of which 14.24% is BLM land, 8.76% is state land, and 76.99% is deeded land. The leases authorizing grazing on these allotments include a total of 2,275.6 acres of federal land and 238 animal unit months (AUMs) of forage. Grazing use authorized is for cattle and sheep. BLM is analyzing these allotments and their grazing leases on a watershed scale in order to evaluate the effects of the proposed action on the wider environment and to better capture cumulative impacts. Combination of the will improve the efficiency of the lease renewal process. The BLM parcels associated with each allotment are listed below and shown in Attachment 1:

- Claypit (#02398)
T43N R82W - Sec. 22 SE $\frac{1}{4}$ NW $\frac{1}{4}$; Sec. 23 W $\frac{1}{2}$ NW $\frac{1}{4}$, NE $\frac{1}{4}$ NW $\frac{1}{4}$; Sec. 26 E $\frac{1}{2}$ NW $\frac{1}{4}$, W $\frac{1}{2}$ NE $\frac{1}{4}$
- E.K Mountain (#12200):
T44N R83W - Sec. 8 Lots 2, 3, & 8; Sec. 9 SW $\frac{1}{4}$ SW $\frac{1}{4}$
- Flynn Draw(AKA Kaycee L and L) (#12148):
T43N R81W - Sec. 5 NW $\frac{1}{4}$ SE $\frac{1}{4}$; Sec. 19 Lot 2, SW $\frac{1}{4}$ NE $\frac{1}{4}$, SE $\frac{1}{4}$ NW $\frac{1}{4}$, E $\frac{1}{2}$ SE $\frac{1}{4}$; Sec. 20 S $\frac{1}{2}$; Sec. 21 W $\frac{1}{2}$ W $\frac{1}{2}$; Sec. 28 NW $\frac{1}{4}$ NW $\frac{1}{4}$
- Keyes Draw (#02277):
T44N R81W - Sec. 30 Lots 3 & 4
- School Section Draw(AKA School Sec Dr/MDLFRK) (#22122):
T43N R82W - Sec. 15 SE $\frac{1}{4}$ SW $\frac{1}{4}$; Sec. 22 NE $\frac{1}{4}$ NW $\frac{1}{4}$, N $\frac{1}{2}$ NE $\frac{1}{4}$
- Trough Draw (#12043):
T42N R83W - Sec. 22 E $\frac{1}{2}$ SW $\frac{1}{4}$, S $\frac{1}{2}$ SE $\frac{1}{4}$; Sec. 23 SW $\frac{1}{4}$ SW $\frac{1}{4}$; Sec. 26 NW $\frac{1}{4}$, N $\frac{1}{2}$ SW $\frac{1}{4}$, SE $\frac{1}{4}$ SW $\frac{1}{4}$; Sec. 27 N $\frac{1}{2}$ NE $\frac{1}{4}$, SE $\frac{1}{4}$ NE $\frac{1}{4}$; Sec. 35 W $\frac{1}{2}$ NE $\frac{1}{4}$, SE $\frac{1}{4}$ NE $\frac{1}{4}$, NE $\frac{1}{4}$ NW $\frac{1}{4}$

This EA, WY-070-EA14-250 analyzes the impacts of the proposed action on the environment in accordance with the National Environmental Policy Act (NEPA). The current grazing lessees own or control the base property associated with their allotment and currently holds the grazing authorization for that allotment. Lease **#4907476** was last renewed per Section 325, Title 3, H.R. 2691 (Consolidated Appropriations Act, 2004) on March 1st, 2009 and expire on February 28th, 2019. Leases **#4907327**, **#4907238**, and **#4907199** was last renewed per Section 415, H.R. 2055 (Consolidated Appropriations Act, 2012) on March 1st, 2012 and expire on February 28th, 2022. Lease **#4907667** was last renewed per Section 416, Public Law 111-88 (Consolidated Appropriations Act) on March 1st, 2010 and expires on February 28th, 2020. . Lease **#4907192** was last renewed per Section 416, Public Law 111-88 (Consolidated Appropriations Act) on January 1st, 2011 and expires on December 31st, 2020. The leases issued under the Appropriations Act are not considered fully processed until NEPA analysis is complete.

The current lessees have each applied for renewal and/or issuance of the lease authorizing grazing on their allotment(s). Per 43 CFR 4110, the previous grazing lessees have preference in retaining the grazing privileges attached to each property. If the proposed action is implemented, a new term grazing lease will be offered to each lessee.

The Buffalo Resource Management Plan (RMP) was amended to adopt the *Standards for Healthy Rangelands and Guidelines for Livestock Grazing Management for Public Lands Administered by the Bureau of Land Management in the State of Wyoming* (1997) (S&Gs). A formal assessment of the S&Gs has not yet been conducted for the Claypit, E.K. Mountain, Flynn Draw, Keyes Draw, and School Section Draw allotments. Although no assessments have been completed, the BLM expects that recent range monitoring and field visits to the allotments would confirm that the allotments are meeting the S&Gs for healthy rangelands in Wyoming. In 1998 the BFO developed a schedule for evaluating S&Gs. The allotments on this list are all in the “I” and “M” categories, which are highest priority for management and evaluation as described in the WY S&Gs Implementation Plan. Active management of category “C” isolated public lands is at a public cost and management effort largely beyond the scope of generating public benefit; see generally, *Ted Lapis v. U.S.*, 178 IBLA 62 (2009).

A Formal *Standards for Healthy Rangelands and Guidelines for Livestock Grazing Management for Public Lands Administered by the Bureau of Land Management in the State of Wyoming* (S&G) assessments has been completed on the Trough Draw allotment. The assessment found the allotment to be meeting all applicable standards under current grazing practices. BLM distributed the final S&G report to all interested persons, and it is available for review at the Buffalo Field Office.

1.2 Need for the Proposal

BLM’s need for the proposal is to determine whether, how, and under what conditions to support the Buffalo Resource Management Plan’s (RMP) goals, objectives, and management actions (1985, 2001, 2003, and 2011) with allowing livestock grazing on public lands managed by the BLM. Allotment information is an integral part of this EA, which BLM incorporates here by reference. Conditional livestock grazing finds support in the RMP, Taylor Grazing Act, FLPMA, and other laws and regulations.

Decision to be made: The BLM will decide whether or not to approve the proposed action, and if so, under what terms and conditions agreeing with the BLM’s multiple use mandate, environmental protection, and RMP.

1.3 Scoping and Issues

The BLM conducts its decision-making per the requirements of the Council on Environmental Quality (CEQ) regulations implementing the NEPA, the Department of Interior (DOI), and BLM policies and procedures implementing NEPA. NEPA and the associated regulatory and policy framework require federal agencies use the scoping process in their decision-making. This EA received internal scoping, from interdisciplinary resource specialists in the BLM Buffalo Field Office. The identified issues are listed below and are incorporated in Sections 3 and 4 of this EA.

- How would the proposed action affect current livestock grazing management?
- How would the proposed action impact riparian areas/drainages?
- How would the proposed action impact invasive species?
- How would the proposed action impact sensitive soils?
- Would and how would the proposed action affect any special status species, particularly Greater Sage-Grouse (candidate species)?
- How would the proposal impact cultural resources or lands with wilderness characteristics?
- How can grazing impact native vegetation?

- Whether rangeland health assessment has been completed on the allotment

This EA was sent to interested parties of record and is posted on the Buffalo Field Office (BFO) website to solicit public and cooperating agency comments over a 30-day period:

<http://www.blm.gov/wy/st/en/info/NEPA/documents/bfo.html>. The BLM received comments to assess whether the EA covers the issues raised and adequately addresses their significance. The BLM's response consists of addressing public comments in the decision record or results in the preparation of a new EA.

2.0 PROPOSED ACTION (PROPOSAL) AND ALTERNATIVES

2.1 Alternative I – Proposed Action/No Action – Renewal of Leases without Modification

The BLM proposes to maintain and improve land health and enhance habitat conditions on public lands in the BFO stewardship area by maintaining and/or enhancing upland grassland health and sagebrush habitats (species composition and structure) and maintaining riparian, wetland, and aquatic habitats through existing livestock grazing management.

Since no changes are proposed, the Proposed Action Alternative and the No Action Alternative are the same (per BLM IM 2000-022, Change 1 (1999)). The proposed action is to offer a new 10 year term grazing for each of the following allotments: Claypit (#02398), E.K. Mountain (#12200), Flynn Draw (#12148), Keyes Draw (#02277), School Section Draw (#22122), and Trough Draw (#12043). Each lease will have the same terms and conditions as the expiring/expired leases. Decisions will be written separately for each grazing lease. Table 1 shows the current authorized use (mandatory terms and conditions) for each lease.

Table 1 Mandatory Terms and Conditions of the grazing leases affected by the proposed action

Authorization Number	Allotment Number	Allotment Name	Public Acres	% Public Land*	Livestock Number*	Livestock Kind	Season of Use	AUMs	Type of Use
4907667	02398	Claypit	360	12	14	Cattle	3/1 to 2/28	20	Active
					120	Sheep	3/1 to 2/28	35	Active
4907327	12200	E.K. Mountain	155.44	15	50	Cattle	6/15 to 9/30	27	Active
4907238	12148	Flynn Draw	761.27	5	71	Cattle	3/1 to 2/28	43	Active
4907476	02277	Keyes Draw	78.89	100	3	Cattle	7/15 to 9/15	6*	Active
4907199	22122	School Section Draw	160	3	300	Cattle	5/01 to 7/30	27	Active
4907192	12043	Trough Draw	760	10	145	Sheep	3/1 to 2/28	35	Active
					35	Cattle	3/1 to 2/28	42	Active
		Total 2,275.6					Total 235		

*Note: The Percent public land and livestock numbers will be changing from the existing leases. See table 2 describing the changes to the leases. Those leases with 100% public land are for billing purposes only.

*Keyes Draw lease does not show all 9 AUMs that are allotted on the current lease. See table 2 which shows what new lease will look like to show all 9 AUMs of use.

BLM identified boundary inaccuracies with the affected allotments so the percent public land and number of head will change on the grazing leases. Table 2 shows the adjustment to the grazing lease due to the administrative errors. The % public land and livestock number will replace the existing leases numbers. This is administrative correction is similar to an administrative maintenance action not needing any further analysis; see 43 CFR 1610.5-4. Acres are being used to calculate percent public land. The percent

public land and livestock numbers are not indicative of the actual stocking rate because the percent public land is calculated on an acreages basis and not the available forage. BLM recognizes that the allotments consist primarily of non-federal lands. As such, BLM will not limit the season of use or number of livestock as long as grazing use is not to the detriment of the public lands. The lease schedule shown is primarily for billing purposes.

Table 2 New Lease with Administrative Changes

Authorization Number	Allotment Number	Allotment Name	Public Acres	% Public Land*	Livestock Number*	Livestock Kind	Season of Use	AUMs	Type of Use
4907667	02398	Claypit	360	19	9	Cattle	3/1 to 2/28	20	Active
					77	Sheep	3/1 to 2/28	35	Active
4907327	12200	E.K. Mountain	155.44	9	84	Cattle	6/15 to 9/30	27	Active
4907238	12148	Flynn Draw	761.27	11	33	Cattle	3/1 to 2/28	43	Active
4907476	02277	Keyes Draw	78.89	100	4	Cattle	7/15 to 9/15	9	Active
4907199	22122	School Section Draw	160	10	90	Cattle	5/01 to 7/30	27	Active
4907192	12043	Trough Draw	760	20	73	Sheep	3/1 to 2/28	35	Active
					17	Cattle	3/1 to 2/28	42	Active
		Total 2,275.6					Total 238		

The “other terms and conditions” for each lease are listed below. These ensure the lease conforms to the goals and objectives of the Buffalo RMP Records of Decision (RODs).

- This authorization is subject to cancellation, suspension, or modification for any violation of the regulations at 43 CFR Part 4100, or of the terms and conditions of the authorization
- The terms and conditions of your lease may be modified if additional information indicates that revision is necessary to conform to 43 CFR 4180
- Lessee agrees to allow authorized officers of the USDI-BLM to enter the leased lands at any time for the purpose of inspection
- Please notify BLM if number/kind of livestock or dates of use change

The proposal will issue new 10 year term grazing leases to the grazing lease applicants. The applicants are in good standing with the BLM and meet all qualifications for obtaining a grazing lease under 43 CFR 4110.1 and 4110.2. Per 43 CFR 4130.2(a), “Grazing permits or leases shall be issued to qualified applicants to authorize use on the public lands and other lands under the administration of the [BLM] that are designated as available for livestock grazing through land use plans.” During the 10 year lease term or following the expiration of the lease, the lease may be modified if information indicates changes in management are needed to ensure the allotments are meeting or progressing towards achieving the S&Gs.

The applicants are not proposing any projects or other surface disturbing activities in connection to these lease issuances. The BLM will analyze any future range improvement projects associated with these allotments under separate, site-specific analysis.

2.2 Alternative II – No Grazing Alternative

Under this alternative the BLM will not permit livestock grazing on the Claypit (#02398), E.K. Mountain (#12200), Flynn Draw (#12148), Keyes Draw (#02277), School Section Draw (#22122), and Trough Draw (#12043) allotments. Alternative II allows the BLM to place a no grazing provision on any or all of the allotments listed in Table 1, singularly or in any combination, in the most efficient, effective legal

means. BLM would cancel the existing grazing leases per 43 CFR parts 4100 and 1600 to eliminate grazing on the allotments.

2.3 Alternatives Considered but not Analyzed in Detail

2.3.1 Greater Sage-Grouse (GSG) Alternative.

BLM IM WY-2012-019 (2012) requires the BLM to address a reasonable range of alternatives in livestock grazing EAs in order to assess the impacts of livestock grazing on GSG habitat and land health. The IM also stipulates that a deferred grazing system alternative should be considered if the size of the allotment warrants it. The size, continuity, and management opportunity of the public lands in the allotments make a BLM-administered deferred or rest-rotation grazing system an unreasonable alternative in these specific cases. Therefore a GSG alternative is not warranted. Although the Claypit, School Section Draw, and Trough Draw allotments are in (GSG) Core Population area, the management opportunity does not warrant a BLM administered deferred grazing system as there are no existing fences to exclude livestock from the BLM lands nor is there an allotment management plan at defers grazing.

2.4 Conformance to the Land Use Plan, Regulations, and Laws

This proposal does not diverge from the goals and objectives in the Buffalo Resource Management Plan (RMP), 1985, 2001, 2003, 2011, and generally conforms to the terms and conditions of that land use plan, its amendments, and supporting FEISs, 1985, 2003.

3.0 AFFECTED ENVIRONMENT

3.1 Introduction

The Claypit (#02398), E.K. Mountain (#12200), Flynn Draw (#12148), Keyes Draw (#02277), School Section Draw (#22122), and Trough Draw (#12043) allotments are located in Johnson County and are best approached by various county and state roads. There is limited to no legal public access to BLM land in the allotments. The allotments are in the Powder River Basin, Casper Arch, and Foothills Shrublands and Low Mountains level IV ecoregions. The Powder River Basin and Casper Arch regions are unglaciated, rolling, irregular and dissected plains. Perennial streams in the area are of montane origin with sand, gravel, and cobble substrates. The area's ephemeral or intermittent streams have sand, sandy or silty substrates. The Foothills Shrublands and Low Mountains regions are unglaciated and glaciated with alluvial fans, steep hillslopes, valleys, and ridges. Streams are of typically spring fed with a cobble substrate. The allotments lie within the 10-14" Northern Plains (NP) precipitation zone, Major Land Resource Areas (MLRA) 58B and 43B. Mean temperatures in January are 0°F (low) and 36°F (high) and in July they are 44°F (low) and 88°F (high). (Chapman, et al., 2004)

In addition to the grazing leases, BLM authorizes other uses on the public lands the allotments, see Section 4.2. Livestock grazing, wildlife use, and oil and gas production are common area land uses. Recreation, primarily big game hunting, may also occur. Table 3 shows the authorized rangeland improvement projects in or boarding these allotments. Maintenance of these projects is the grazing lessee's responsibility.

Table 3. Rangeland Improvements on public lands

Allotment Name	Allotment #	Project Name (Project #)	
Claypit	02398	Domingo Martirena Fence #960924	Gosney Fence #960615
E.K. Mountain	12200	None	
Flynn Draw	12148	Dry Creek Fence #960135	JB Rissler Fence #960619
		J.B. Rissler Stockwater Dam #961278	Domingo Martirena Fence #960924

Keyes Draw	02277	Ross Fence #964961	
School Section Draw	22122	Gosney Fence #960615	Arndt Fence #961095
		Thompson Fence #960999	
Trough Draw	12043	Eldon F. Keith & Sons Fence #960965	Harlan Fence #961065
		Haines Fence #960993	Fred Lund Fence #960896

The proposed action does not affect the following resources, which receive no further analysis:

Air Quality	Mineral Resources	Visual Resource Management
Areas of Critical Environmental Concern (ACEC)	Native American Religious Concerns	Water Quality and Prime or Sole Source of Drinking Water
Environmental Justice	Paleontology	Wetlands and Riparian Zones
Prime or Unique Farmlands	Recreation	Wild and Scenic Rivers
Flood Plains	Traditional Cultural Properties	Wilderness Values
Hazardous or Solid Wastes		

3.2 Livestock Grazing

In 1985, BLM established three categories for allotments to identify areas where management was potentially needed, as well as to prioritize workloads and the use of range improvement funds. The categories classify allotments as Improve Existing Resource Conditions (I), Maintain Existing Resource Conditions (M), or Custodial Management (C) (USDI 2008). The Claypit (#02398), E.K. Mountain (#12200), Flynn Draw (#12148), Keyes Draw (#02277), School Section Draw (#22122), and Trough Draw (#12043) allotments are category “C” allotments, meaning their management is minimal, due to the small amount of public land in the allotments. The BLM’s rationale for this classification is that there are no identified resource problems, and the size and continuity of the public land is not conducive to more intensive BLM management. The allotments have low potential for yielding a positive return on public investment in management or rangeland project development.

The allotments have been grazed for numerous years. Current livestock grazing season within all allotments is shown in Table 1. The total AUMs available for grazing on public lands within the allotments is 238 AUMs. The allotments consist primarily of private lands except for the Keyes Draw allotment. Authorized range improvements include those shown above in Table 3. Table 4 describes the current breakdown of land ownership and AUMs.

Table 4-Land ownership and AUMs

Allotment #	Allotment Name	Surface Ownership*	Acres	Percent	AUMs
02398	Claypit	BLM	360	19	55
		Private	1,508	81	230
		State	0	0	0
		Total	1,868		285
12200	E.K. Mountain	BLM	155.44	9	27
		Private	1,500	91	261
		State	0	0	0
		Total	1,655.44		288
12148	Flynn Draw	BLM	761.27	11	43

		Private	5,983	87	338
		State	120	2	7
		Total	6,864.27		388
02277	Keyes Draw	BLM	78.89	60	9
		Private	52	40	6
		State	0	0	0
		Total	130.89		15
22122	School Section Draw	BLM	160	10	27
		Private	773	49	130
		State	640	41	108
		Total	1,573		265
12043	Trough Draw	BLM	760	20	77
		Private	2,484	64	252
		State	640	16	65
		Total	3,884		394
		Total (all allotments)	15,975.6		1,635
		BLM (all allotments)	2,275.6	14	238
		Private (all allotments)	12,300	77	1,217
		State (all allotments)	1,400	9	180

*Note: Data in this table were estimated by BLM and compiled using ArcGIS data, thus acreages and AUMs on private and state land are approximate.

3.3 Soils

Alfisols, Ardisols and Entisols are the most common soils in the allotments. Ardisols are mixed alluvium derived from andesite, limestone, and quartzite. Alfisols are moderately leached soils that have a relatively high native fertility. Alfisols have mainly formed under forested environments and have a subsurface high in clay content. Ardisols are typically well drained with a low runoff classification and an Ardic moisture regime. Entisols are derived from sandy elolian material and have an excessively drained drainage class. According to the sensitive soils layer for the Buffalo Field Office, no known highly erosive soil map units are present within the allotments.

The allotments have a variety of soil mapping units from the Soil Survey of Johnson County, Southern Part. Most often the mapping units are two or more soil types, forming complexes or associations. There are about 25 different mapping units on BLM lands in the assessment area. The 10 most common soils present have been placed in the following soil map units:

Soil Survey of Johnson County, Southern Part

SDE-Samsil-Renohill association
WE-Wormser-Englewood association
SK-Shale rock land
SE-Samsil-Renohill association
MTD-Moret-Rock land complex, hilly
TE-Terry-Tassel association
SVE-Sunup-Rock outcrop complex, steep
WM-Wormser-Shirk association
TRE-Travessilla-Rock outcrop complex, steep
SH-Shale outcrop

A description of these soils is found in the (Soil Survey Geographic (SSURGO) database for Johnson County Area, Wyoming, Southern Part , 2011) published by the US Department of Agriculture Natural Resources Conservation Service (NRCS).

3.4 Vegetation

Based on soil mapping units, the ecological sites present in the area are predominately Northern Plains Loamy 10-14" precipitation, Northern Plains Shallow Clayey 10-14" precipitation, and Northern Plains Clayey 10-14" precipitation. Over 50% of the allotments are unclassified but can be associated as a shallow site on steep slopes. Some of the unclassified sites can also be associated with forested sites which in many cases do not have a rangeland ecological site name. Vegetation is predominantly basin exposed rock and mixed grass prairie type vegetation. Wyoming big sagebrush is the most common species of sagebrush found in this area. Other shrubs, including greasewood, snakeweed, rabbitbrush, fourwing saltbush, yucca, and juniper also occur in the area. Perennial grasses that occur on the uplands include western wheatgrass, bluebunch wheatgrass, needle and thread grass, green needle-grass, Sandberg bluegrass, prairie junegrass, blue grama, and threadleaf sedge. Common forb species include phlox, sego lily, buckwheat, yarrow, fleabane, aster, hawksbeard, onion, scarlet globemallow, and scurfpea. Most vegetation growth occurs in May and June. A complete description of the vegetation types can be found in each specific Ecological Site Description (ESD) (U.S. Department of Agriculture, Natural Resources Conservation Service, 2012).

Currently BLM authorizes 238 total AUMs in the allotments. BLM calculated the AUMs using light-to-moderate stocking rates, per the Land Planning and Classification Report of the Public Domain Lands in the Powder and Missouri River Basin (U.S. Department Interior- Bureau of Land Management, 1956).

3.5 Noxious Weeds and Invasive Non Native Plant Species

Cheatgrass (downy brome) and Japanese brome are an invasive species that are common in all ecological sites in the BFO area. These invasive annuals are uncommon on all the allotments. Cheatgrass is present primarily in isolated areas and areas along road. The BLM lands in the allotments are relatively free of noxious weeds except along travel corridors, in drainage bottoms and in areas with a history of heavy disturbance. The two most common noxious weeds present are thistles and skeleton weed. These weeds are a minor component of the plant species present in the allotments.

3.6 Water Resources

The allotments are located primarily within the Middle Fork of the Powder River level 8 sub-watersheds identified by the United States Geological Survey (USGS) (Subcommittee on Spatial Water Data, 2000). The creeks and rivers in the area are primarily on private lands. The Pass Creek drainage runs through a portion of the E.K. Mountain allotment. All other drainages on BLM land in the allotments are ephemeral or intermittent. This means that water flow generally occurs during the wet season (50% of the year or less) so water typically only flows in these channels during times such as spring runoff. Water ceases to flow in these channels during drier periods but may still continue to run underground. As such, there may or may not be riparian vegetation associated with intermittent stream channels. Also, they are not a reliable source of water for livestock or wildlife.

3.7 Wildlife

BLM conducted wildlife evaluations including comparison of past and current aerial imagery and review of wildlife geospatial datasets (available at BFO). They assessed the occurrence of selected wildlife species and their habitats, and evaluated the anticipated effects associated with issuing these grazing leases on the Claypit, E.K. Mountain, Flynn Draw, Keyes Draw, School Section Draw, and Trough Draw Allotments. The evaluations included selected individual species or species groupings that are ecologically, economically, or socially important. Tables A.1 and A.2 in the appendix summarize the affected environment for selected wildlife.

Wildlife habitats occurring on the allotments are results of a complex history of natural and man-caused influences. Important natural influences included short- and long-term climate variation, infrequent wildfire, and ungulate grazing; especially by bison ((Baker, 2006), (Mack & Thompson, 1982)). From about 1880 to 1910, the removal of native bison, and their subsequent replacement with “vast numbers” of cattle and excessive numbers of sheep, greatly influenced the PRB, including these four allotments ((Cassity, 2007); (Patterson, 1952)). The combined impacts of cattle and sheep overstocking and climate may have initiated the ongoing epicycle of gully erosion that is evident throughout the Basin (Leopold & Miller, 1954). Enactment of the Taylor Grazing Act of 1934 repaired early range degradation and aided the recoveries of reduced wildlife populations (Patterson 1952).

The plant community and wildlife habitat it supports within the 6 allotments is currently under light to moderate stocking rates and season-long grazing by livestock in the absence of fire or brush control. Big sagebrush is a significant component of this plant community. Cool-season grasses make up the majority of the understory with the balance made up of short warm-season grasses, annual cool-season grass, and miscellaneous forbs.

Ecological sites found within the 6 allotments include Loamy, Clayey, Shallow Clayey and Shallow Sandy. However, much of the BLM lands include shale blowouts and rock out-crops or badlands that are not rated as these areas lack suitable soils. The allotments all fall within a precipitation zone of 10-14 inches per year. The NRCS's State and Transition models are based on the Ecological Site Descriptions (ESD's). The ESD's for the Loamy, Clayey and Shallow Clayey ecological sites indicate the state and transition is a mixed sagebrush/grass plant community. The combination of an overstory of sagebrush and an understory of grasses and forbs provides a very diverse plant community for wildlife. The crowns of sagebrush tend to break up hard crusted snow on winter ranges, so mule deer and antelope may use this state for foraging and cover year-round, as would cottontail and jack rabbits. It provides important winter, nesting, brood-rearing, and foraging habitat for GSG. Brewer's sparrows nest in big sagebrush plants and a host of other nesting birds utilize stands in the 20-30% cover range. This plant community is resistant to change. A significant reduction of big sagebrush can only be accomplished through fire or brush management. The herbaceous species present are well adapted to grazing; however, species composition can be altered through long-term overgrazing. If the herbaceous component is intact, it tends to be resilient if the disturbance is not long-term. Where greasewood occurs (such as within alkaline soils) moderate, continuous, season-long grazing will convert the plant community to a greasewood plant community.

The Shallow Sandy ESD has a state and transition of threadleaf sedge/fringed sagewort/yucca. This community provides limited foraging for antelope and other grazers due to low production. They may be used as a foraging site by GSG if proximal to woody cover.

3.7.1 Threatened, Endangered, Special Status (Sensitive) Species and Migratory Birds

Project effects will not impact threatened, endangered, and special status species occurring in the area beyond the level analyzed in the PRB FEIS. A discussion of the affected environment is in the PRB FEIS, pp. 3-174 to 3-179. A description of habitat and presence for threatened and endangered species is in Table A-1, Appendix 1, below. Neither Ute ladies'-tresses orchid (ULT) nor black-footed ferret habitat is present in the project area. These species are not expected to occur.

Migratory Birds Special Status (Sensitive) Species

The PRB FEIS discussed the affected environment for migratory birds, pp. 3-150 to 3-153. Migratory birds migrate for breeding and foraging at some point in the year. The BLM-Fish and Wildlife Service (FWS) Memorandum of Understanding (MOU) (2010) promotes migratory birds' conservation, per Executive Order 13186 (Federal Register V. 66, No. 11). BLM includes migratory birds in every NEPA

analysis of actions having potential to affect migratory bird species of concern to fulfill obligations under the Migratory Bird Treaty Act (MBTA). BLM encourages voluntary design features and conservation measures agreeing with those in the programmatic mitigation in Appendix A of the PRB ROD.

Habitats occurring within the 6 allotments include sage-brush steppe grasslands, mixed grass prairie, and mature deciduous trees. Many species that are of high management concern use these areas for breeding habitats (Saab and Rich 1997). Nationally, grassland and shrubland birds declined more consistently than any other ecological association of birds over the last 30 years (WGFD 2009). The FWS's Birds of Conservation Concern (BCC 2008) report identifies species of all migratory nongame birds that, without additional conservation actions, are likely to become candidates for listing under the Endangered Species Act. Species in this list that have the potential to occur in the project area are: Brewer's sparrow, sage thrasher, loggerhead shrike, short-eared owl, and grasshopper sparrow. Of these, 3 species are identified on the BLM Wyoming Sensitive Species list.

The WGFD Wyoming Bird Conservation Plan (Nicholoff 2003) identified 3 groups of Wyoming's high-priority bird species: Level I – those that clearly need conservation action, Level II – species where the focus should be on monitoring, rather than active conservation, and Level III – species that are not of high priority but are of local interest. Species likely occurring in the project area are in Table 3.5.

Table 5 Migratory Birds Occurring in Shrub-Steppe Habitat in NE Wyoming (Nicholoff 2003)

Level	Species	WY BLM Sensitive	Species	WY BLM Sensitive
Level I	Ferruginous hawk	Yes	Sage sparrow	Yes
	Brewer's sparrow	Yes		
Level II	Lark bunting	No	Sage thrasher	Yes
	Lark sparrow	No	Vesper sparrow	No
	Loggerhead shrike	Yes		

Several migratory species are also BLM special status (sensitive) species (SSS). Those known or suspected of occurring in the project area include Baird's sparrow, Brewer's sparrow, ferruginous hawk, loggerhead shrike, long-billed curlew, sage sparrow and sage thrasher.

3.7.2 Candidate Species

This EA discusses GSG in detail because they are a candidate species, currently warranted for listing under the Endangered Species Act (U.S. Fish and Wildlife Service(USFWS), 2010)and are of heightened management concern in the BFO. GSG are also a Wyoming BLM sensitive species and a Wyoming Game & Fish Department (WGFD) Species of Greatest Conservation Need (SGCN). GSG habitat is present on BLM lands in the Claypit, E.K. Mountain, Flynn Draw, Keyes Draw, School Section Draw, and Trough Draw. Allotments. Habitat models indicate that BLM lands in all 6 allotments contain approximately 41% winter habitat and 43% nesting habitat for GSG. There is 1 occupied GSG lek known within the E-K Mountain allotment; the E-K Mountain Road lek. There are no GSG leks in other 5 allotments.

Greater Sage-Grouse

Habitat models indicate that BLM lands in all 6 allotments have GSG nesting brood rearing habitat (968 acres) as well as winter habitat (938 acres). The E.K. Mountain GSG lek lies within the E.K. Mountain allotment. The Rim Hansen lek is also within 2 miles of the E.K. Mountain allotment. The Arndt Draw lek is within 2 miles of the School Section Draw allotment. All 6 allotments have GSG leks within 4 miles; a total of 19 leks. Tough Draw, School Section Draw and the Claypit allotments fall entirely with priority GSG habitat or CORE area. This includes 1,278 acres of BLM administered lands within those 3 allotments. None of the allotments have been enrolled in the NRCS's Sage-Grouse Initiative program where livestock operational BMPs could be implemented to improve sage brush habitat.

As noted in BLM WY-IM-2010-012 (2009), domestic livestock grazing has occurred in and around these allotments and “within the range of [GSG] for over 150 years and is the most common and widespread use of rangelands in the western United States. Livestock grazing practices may affect herbaceous composition, cover, and height and has a potential to impact Wyoming Big Sagebrush habitats. WY BLM has standards and guidelines to ensure proper livestock grazing management on public lands which can help maintain healthy rangeland conditions and provide functional habitat for [GSG]. However, poor livestock grazing practices can have long-term negative impacts on [GSG] habitat by degrading sagebrush, meadow, and riparian communities (Bohne, Rinkes, & Kilpatrick, 2007).”

3.7.3 Big Game

Big game species occurring in the EA area include elk, pronghorn, white-tailed deer, and mule deer. Table 4 summarizes WGFD big game seasonal range data for the allotments.

Table 6. Big Game Seasonal habitat provided in each Allotment

Species	Claypit	E.K. Mountain	Flynn Draw	Keyes Draw	School Section Draw	Trough Draw
White-tailed deer	Yearlong	None	Yearlong	None	Yearlong	None
Mule deer	Yearlong/Winter-Yearlong	Winter Yearlong	Winter Yearlong	Winter Yearlong	Winter Yearlong	Yearlong/Winter-Yearlong
Pronghorn	Yearlong/Winter-Yearlong	Winter-Yearlong	Yearlong	Winter Yearlong	Yearlong/Winter-Yearlong	Yearlong/Winter-Yearlong
Elk	None	None	None	None	None	None

Yearlong use is when a population makes general use of suitable documented habitat sites in the range on a year-round basis, but animals may leave the area under severe conditions. Winter-yearlong use is when a population or a portion of a population of animals makes general use of the documented suitable habitat sites in this range on a year-round basis, but during the winter months there is a significant influx of additional animals into the area from other seasonal ranges.

As of the WGFD’s 2012 Job Completion Report, populations of white-tailed deer in Power River Herd Unit (303) are 8% above objectives. The allotments are split east and west by Interstate 90 into the mule deer Upper Powder River (322) and the Pumpkin Buttes herd units (320) which are 12.4% and 41.1% below their WGFD objectives respectively. The allotments are also split east-west into the pronghorn Upper Powder River herd unit, 57% above objective, and Crazy Woman herd unit, 73% above objective. The elk population in the South Bighorn herd unit is 109% above the herd objective.

3.7.4 Raptors

Raptors use the Claypit, E.K. Mountain, Flynn Draw, Keyes Draw, School Section Draw, and Trough Draw Allotments for breeding, foraging, wintering, or migration. Common raptor species frequenting the allotments include golden eagle, northern harrier, red-tailed hawk, Swainson’s hawk, American kestrel, short-eared, and great-horned owls. Less common species that may use area habitats include bald eagle, rough-legged hawk, and merlin. Bald eagles occasionally roost in cottonwoods in nearby riparian areas in the winter and forage in the area. Raptors prey upon small mammals, reptiles, and fish. Their survival and reproductive success depends on the availability and abundance of these food sources.

There are no known raptor nests within the 6 allotments, however, the survey efforts in these 6 allotments have been minimal and nesting habitat is present throughout the area.

3.8 Cultural and Historic Values

Class III inventory for cultural resources has not occurred on the majority of the Claypit Allotment, although the Wyoming Cultural Records Office (WYCRO) database revealed that inventories related primarily to DEQ AML projects, road and bridge projects, and overhead powerlines have discovered cultural sites. The Claypit Allotment contains one known cultural site which is not eligible for the National Register of Historic Places (NRHP). There may be many more unrecorded cultural sites, some which may be eligible for listing on the NRHP within the allotment.

Class III inventory for cultural resources has not occurred on the E. K. Mountain Allotment and the allotment contains no known cultural sites. There may be unrecorded cultural sites, some which may be eligible for listing on the NRHP within the allotment.

Class III inventory for cultural resources has not occurred on the majority of the Flynn Draw Allotment, although the WYCRO database revealed that inventories related primarily to range improvement projects, conventional oil wells, seismic projects, telephone lines, and access roads have discovered cultural sites. The Kaycee L and L Allotment contains three known cultural sites, one of which is unevaluated for the NRHP and two of which are not eligible. There may be many more unrecorded cultural sites, some which may be eligible for listing on the NRHP within the allotment.

Class III inventory for cultural resources has not occurred on the majority of the Keyes Draw Allotment, although the WYCRO database revealed one previous inventory for a telephone line. The Keyes Draw Allotment contains no known cultural sites. There may be unrecorded cultural sites, some which may be eligible for listing on the NRHP within the allotment.

Class III inventory for cultural resources has not occurred on the majority of the School Section Draw Allotment, although the WYCRO database revealed that inventories related primarily to bentonite mining, bridge repair/replacement, and DEQ AML projects have discovered cultural sites. The School Section Draw Allotment contains five known cultural sites, two of which are unevaluated for the NRHP, two of which are eligible for the NRHP, and one of which is not eligible. There may be many more unrecorded cultural sites, some which may be eligible for listing on the NRHP within the allotment.

Class III inventory for cultural resources has not occurred on the Trough Draw Allotment and the allotment contains no known cultural sites. There may be unrecorded cultural sites, some which may be eligible for listing on the NRHP within the allotment.

3.9 Socioeconomics

Ranching is a strong component of local society and has a historical value, as grazing has occurred in northeast Wyoming since the late 1800s. According to the U.S. Department of Agriculture Agricultural Census (U.S. Department of Agriculture, 2010), Wyoming ranked 24th in the nation in the value of sale of cattle and calves, and 4th for value of sale of sheep and lambs. Within Wyoming, sales of cattle and calves ranked first in market value of agricultural products sold, with sheep and goat sales ranking 5th. These statistics show that ranching is a key component in both Wyoming and the nation's agricultural industry. The sale of livestock is linked to the commodity value of public rangelands. Public lands are an essential part of many ranch operations in the Buffalo Field Office, as they are intermingled with and grazed in conjunction with private and state lands. The BLM grazing lease helps maintain the successful functioning of the ranch operation and support the cultural lifestyle of the lessee.

Public land grazing contributes to the State of Wyoming's revenue through "payment in lieu of taxes" by the Federal government. All of the grazing allotments managed by the Buffalo Field Office were established according to provisions of Section 15 of the Taylor Grazing Act. Receipts from grazing on Section 15 lands are distributed as follows: 50% goes to the federal government for range betterment

projects, and 50% is returned to the state government. The grazing fee is \$1.35 per animal unit month (AUM) on public land, \$5.13/AUM on Wyoming State Lands, and an average of \$17.60/AUM on private lands. The grazing leases analyzed in this EA generate approximately \$321.3 in federal grazing fees each year.

4.0 ENVIRONMENTAL EFFECTS

4.1 Direct, Indirect, Residual Effects, Mitigation Measures, Cumulative Effects

4.1.1 Livestock Grazing

Alternative I-Proposed Action/No Action Alternative

The direct, indirect, and residual impacts associated with livestock grazing include nutrient cycling, physical damage to vegetation, trailing along fences, trampling and heavier grazing use at salted areas. These impacts are likely to continue upon issuing new leases. The proposed action would allow for the grazing lessees to continue grazing on their respective grazing allotments. Livestock would continue to use up to 238 public AUMs annually; see Tables 1 and 2. Range vegetation inventory (DOI BLM, 1956) data, along with monitoring data from previous years indicate adequate forage is available in the allotments to support the proposed number of livestock, as well as provide for wildlife use, while withstanding the effects of that use. The new grazing leases authorize the same of livestock and season of use relative to each BLM parcel as the previous leases. This action is not proposing any changes to grazing management. The BLM does not expect the issuances of the grazing leases to have any effect on range management.

BLM has identified the scope of the proposed action and alternatives as well as the cumulative effects affected area (CEAA) for livestock grazing as the area within the allotment boundaries. BLM anticipates the direct impacts to last for the life of the grazing lease (10 years), while the indirect and long term impacts may persist.

Cumulative Incremental Effect from the Proposal: The incremental loss of forage available for livestock will occur with the addition of grazing to the past, present, and reasonably foreseeable actions. As long as mitigation and monitoring techniques are implemented to ensure new roads and trails from recreationists and hunters are not made, and fires are suppressed, the loss of vegetation available for livestock should be negligible. Additionally, oil and gas development and rights-of-way may be permitted, thus decreasing the amount of forage available for grazing. However, with best management practices (BMPs) being implemented, their effects should be negligible.

Alternative II-No Grazing Alternative

FLPMA requires the BLM to manage public lands and resources by the principles of multiple use and sustained yield and recognizes the Nation's need for domestic sources of minerals, food, timber, and fiber. FLPMA also requires the BLM, except in emergencies, to give 2 years' notification when cancelling, in whole or in part, an authorization for domestic livestock grazing to devote the associated lands to another public purpose, including disposal. The Buffalo RMP resource management decision reads that livestock grazing is allowed on all area BLM lands except on about 6,000 acres where it is incompatible with other resource uses or values.

There are no fences or natural barriers separating BLM and non-BLM lands. At this time, fencing out the public lands is not practical or cost effective. If extraordinary circumstances arise, such as the identification of an endangered plant or damageable cultural resource on the site, fencing may be a greater priority, and the BLM will address the matter in a separate analysis. If the public lands are not leased, and subsequently not fenced, any livestock use occurring thereon is unauthorized. Selecting this alternative will affect how the adjacent private and state lands are grazed because the lessee must keep livestock off

public lands through herding or fencing, or else be in violation of federal grazing regulations. The mixed ownership pattern in the BFO resource area makes herding difficult, in addition to the fact that herding does not ensure that public lands are not grazed. A rider needs to remain with livestock at all times. Because it is not economically feasible for the BLM to fence all its land parcels, fences will likely be on private land, fragmenting the area and making BLM unable to stipulate wire spacing to facilitate wildlife movement. Most four-strand fences on private land have a top wire of 46-48 inches with 10-12 inch wire spacing and all wires are barbed. In the absence of fences, the BLM must constantly supervise the public lands to assure they are not grazed.

BLM identified no adverse direct, indirect, or residual impacts resulting from livestock grazing which would warrant cancellation of all grazing on these allotments. The Buffalo RMP allows for adjustment of forage allocation as needed, based on evaluation of monitoring, field observations, or other data. Additionally, changes in grazing practices can be effective in mitigating impacts without a corresponding reduction in forage allocation.

Cumulative Incremental Effect from the No Grazing Alternative: Reduced surface disturbance would occur with the removal of grazing. The incremental impacts would be less than those expected under the proposed action.

4.1.2 Soils

Alternative I-Proposed Action/No Action Alternative

Grazing can exert both beneficial and detrimental direct, indirect, and residual effects on a soil resource. The main effects that grazing has on the soil resource is removal of aboveground vegetation and hoof action, potentially leading to increased erosion, increased runoff, reduced infiltration rates and increased bulk density (soil compaction) (Holechek, Pieper, & Herbel, 2004, p. 379). Most of the compaction and erosion will occur where cattle tend to congregate which may include areas along trails, fences and near watering locations. This compaction leads to lowered rates of water infiltration thus leading to high rates of surface runoff and greater soil erosion.

From a positive standpoint, large quantities of dung and urine are deposited in the allotments adding nutrients and organic matter to the soil (McNaughton, 1979). Hoof action benefits the soil resource by improving nutrient cycling by incorporating mulch into soil surface where it can be broken down more quickly by soil organisms (Holechek, Pieper, & Herbel, 2004, p. 379). Livestock grazing can loosen the soil surface during drying periods, remove excess vegetation that may negatively affect net carbohydrate fixation and increase water transpiration rates, and speed up the development of humus in the soil (Holechek, 1981). Because no changes in the current management are being implemented under the proposal, impacts to the soil resource would remain the same and BLM expects no changes from the current state of the resource.

The CEAA for soils is the area inside the grazing allotment boundaries, selected by BLM due to the scope of the proposed action and alternatives. BLM anticipates the direct impacts last for the life of the grazing lease (10 years), while the indirect and long term impacts may last longer.

Cumulative Incremental Effect from the Proposal: The effects of the proposed action, when added to the reasonably foreseeable actions, should be minimal because range health objectives are used in livestock grazing management, hunters and recreationists will be monitored for land abuse, fire suppression will mitigate the severity of fire impacts, and BMPs will be used for new oil, gas and ROW activities. The incremental effects may include soil erosion and soil compaction along new trails made from livestock, roads and trails used by hunting and recreationists, new oil and gas roads, and areas where fires occur. Severity of these impacts would be dependent on the amount of hunter and recreationist use on the allotments, number of oil/gas/ROWs permitted, and the intensity/size of the wildfires.

Alternative II-No Grazing Alternative

With the removal of grazing from the allotments, forage would not be removed by livestock. Standing vegetation and litter would increase. The increase in cover may reduce runoff and erosion. With the removal of livestock from the allotment a decrease in compaction and increase infiltration is anticipated (Pluhar, Knight, & Heitschmidt, 1987). The allotment's nutrient cycle would likely change. Cattle increase soil nutrients by depositing excrement on the soil surface. However, with improper management, they may decrease nutrients by consuming and permanently removing plants that put nutrients into the soil system.

Cumulative Incremental Effect from the No Grazing Alternative: Reduced surface disturbance would occur with the removal of grazing. The incremental impacts would be less than those expected under the proposed action.

4.1.3 Vegetation

Alternative I-Proposed Action/No Action Alternative

The direct, indirect, and residual effects grazing has on vegetation varies greatly depending on many factors including but not limited to: resistance to grazing, genetic potential, growth promoting features, grazing intensity, life stage of plant, and environmental constraints (Holechek, Pieper, & Herbel, 2004, pp. 123-142)). Livestock grazing can have both beneficial and detrimental effects on vegetation depending on the various factors described by Holechek et al. Beneficial impacts may include, but are not limited to: growth stimulation from grazing ruminants saliva (McNaughton, 1979), trampling of seed into the ground (Holechek, 1981), reducing excess accumulation of standing dead vegetation and litter that may chemically and physically inhibit new plant growth (Holechek, 1981), and reducing transpiration losses (Holechek, Baker, Boren, & Galt, 2006). Some detrimental impacts livestock grazing may have on vegetation include, but are not limited to: changes in species composition in upland areas (Brock & Green, 2003), reduced tillering (Belsky, 1986), modified plant growth form caused by consumption of terminal buds, thus promoting lateral branching (Fleischner, 1994), and disruption of ecological succession (Fleischner, 1994).

Under the proposed action, livestock will annually remove approximately 238 AUMs of forage from BLM land in the allotments. Most studies show that light to moderate stocking rates do not compromise rangeland health. BLM authorizes the AUMs based on a light to moderate stocking rate. Therefore, as long as the total number of permitted AUMs consumed does not exceed the allotments' authorized use; the impacts from renewing the grazing leases should not have an undesirable effect on vegetation.

BLM has determined the CEAA for vegetation, noxious weeds, and invasive plants to be the area within the grazing allotment boundaries and the area within one-half mile of those boundaries, in accordance with the scope of the proposed action and alternatives. BLM anticipates the direct impacts to last for the life of the grazing lease, while the indirect and long term impacts may last longer.

Cumulative Incremental Effect from the Proposal: The effects of the proposed action, when added to the reasonably foreseeable actions, should be minimal because rangeland health assessment is used to inform livestock grazing management, hunters and recreationists will be monitored for land abuse, fire suppression will mitigate the severity of fire impacts, and BMPs will be used for new oil, gas and ROW activities. Incremental effects of the proposed action may include forage loss and introduction of non-native species along new trails made by livestock, roads used for hunting and recreation, new oil and gas roads, and in areas where fires occur. The severity of these impacts would depend on the amount of hunter and recreationist use on the allotments, number of oil/gas/ROWs permitted, and the intensity/size of the wildfires.

Alternative II-No Grazing Alternative

The no grazing alternative would eliminate both the beneficial and detrimental impacts associated with grazing. It is likely with the removal of grazing that litter would increase, thus increasing fire potential in the allotments. More vegetation would be available for wildlife and ecosystem function. However, Patton et al., (2007) found that production does not increase with the removal of grazing. Other studies found that removal of grazing can lead to an increase in shrub cover and a decrease in species richness and plant diversity (Manier & Hobbs, 2007).

Cumulative Incremental Effect from the No Grazing Alternative: Reduced surface disturbance would occur with the removal of grazing. The incremental impacts would be reduced compared to those expected under the proposed action.

4.1.4 Noxious Weeds and Invasive Non Native Plant Species

Alternative I-Proposed Action/No Action Alternative

Livestock can transport noxious weeds and invasive nonnative plant species on their coats, feet, and in their digestive tract. Livestock may carry undesirable plants that exist within the allotments or bring them into the allotment from other pastures they have inhabited during their lifetime. Livestock grazing can increase the presence of noxious weeds by over-grazing (DiTomaso, 2000); this is the primary cause of unwanted species invasion (Holechek, Pieper, & Herbel, 2004, p. 508).

Since many roads and trails are present in the allotments, and recreation opportunities exist in the area, new weed introductions are likely to regularly occur. BLM, the county weed and pest agencies, and the grazing lessee monitor these infestations to determine if management changes are needed to control the infestations. Because current and proposed management does not exceed recommended grazing levels and no grazing management concerns occur at this time, BLM anticipates that there will be no increase in noxious weeds or invasive non-native plant species under the proposed action.

Alternative II-No Grazing Alternative

Removing livestock grazing from the public land can promote growth and potential overgrowth of perennial grasses and forbs, thus crowding out or reducing the potential for invasion of noxious and/or invasive species. However the overgrowth of vegetation increases the availability of fine fuels, which also increases the wildfire risk. If fires occurred, they would likely be more intense, allowing opportunistic noxious and invasive species to colonize the public lands. Cooperative weed control efforts could discourage vegetation overgrowth and decrease the fire return interval.

[Cumulative effects for this affected resource are addressed in 4.1.3, Vegetation.]

4.1.5 Water Resources

Alternative I-Proposed Action/No Action Alternative

Riparian areas attract livestock due to environmental and nutritional factors and they may use riparian vegetation disproportionately more than adjacent uplands (Gillen, Krueger, & Miller, 1985) (Howery, Provenza, Banner, & Scott, 1996). This attraction can lead to higher use in riparian areas, thus decreasing streambank stability and cover while increasing soil erosion of the uncovered/unstable streambank (McInnis & McLver, 2001), removal of wood vegetation, soil compaction, and reduced water quality (Parsons, Momont, Delcurto, McInnis, & Porath, 2003). Although uncontrolled livestock grazing can result in watershed destruction in certain areas, controlled grazing is not detrimental to water quality and may increase water quantity (Holechek, 1981). No major degradation problems existed under the past and current management of livestock in these allotments. BLM expects direct, indirect, and residual impacts to water resources to remain unchanged.

The CEAA for water resources is the area within the grazing allotment boundaries and areas extending up and downstream from the allotments, as selected by BLM due to the scope of the proposed action and alternatives. The direct impacts are anticipated to last for the life of the grazing lease (10 years), while the indirect and long term impacts may last longer.

Cumulative Incremental Effect from the Proposed Action: Implementation of the proposed action in combination with any past, present, and reasonably foreseeable actions may increase the possibility for decreased water quality and quantity. This could result from soil erosion into riparian areas. The incremental impacts should be minimal as BLM uses range health objectives in livestock grazing management, and monitors hunters and recreationists for land abuse. Fire suppression will mitigate fire impact severity and BLM uses BMPs for oil, gas, and ROWs.

Alternative II-No Grazing Alternative

The removal of grazing would improve and/or maintain riparian health. Use of riparian plants will decrease, thus reducing trampling and hoof shearing along the green line of riparian areas. Total vascular vegetation, shrub, and graminoid canopy cover would increase with the exclusion of livestock (Schulz & Leininger, 1990).

Cumulative Incremental Effect from the No Grazing Alternative: Reduced surface disturbance would occur with the removal of grazing. The incremental impacts would be less than those expected under the proposed action.

4.1.6 Wildlife

4.1.6.1 Threatened and Endangered Species, Special Status (Sensitive) Species and Migratory Birds

Alternative I-Proposed Action/No Action Alternative
(See Tables A.1 and A.2 in Appendix A)

The USFWS issued a block clearance for the PRB for the endangered black-footed ferret. Alternative B would have “*no effect*” on black-footed-ferrets. The proposed action will have “*no effect*” on Ute ladies’-tresses orchid because the species is not expected to occur in the allotments.

Alternative II-No Grazing Alternative

The U.S. Fish and Wildlife Service issued a block clearance for the PRB for the endangered black-footed ferret. Alternative A would have “*no effect*” on black-footed-ferrets. If grazing is removed from the allotments, there will be “*no effect*” on Ute ladies’-tresses orchid, because there is no suitable habitat for this species in the allotments.

Special Status (Sensitive) Species and Migratory Birds

Alternative I-Proposed Action/No Action Alternative

Geographic Scope and Timeframe for Migratory Birds: The CEAA is within the Powder River and Tongue River watershed boundary. The 6 allotments fall within the Powder River watershed including all of the BLM administered lands. Many of the species in the watershed are contained therein. Migratory species may travel outside the boundary but most of the life cycle likely occurs in the CEAA. BLM anticipates the direct impacts to last for the life of the grazing lease (10 years), while the indirect and long term impacts may last longer.

Cumulative Incremental Effect from the Proposal on Migratory Birds and Special Status Species: Incremental impacts from the proposal when added to the past, present and reasonably foreseeable actions may result in disruption of species habitat through the loss of vegetation and habitat fragmentation. Loss of vegetation would occur from livestock grazing, new roads (recreation/hunting/oil and gas/ROWs), and wild fire. Habitat fragmentation would result from vertical intrusions associated with development and

new roads associated with oil, gas, ROWs, and recreation activities. Additionally, the spread of noxious and invasive weeds from the actions may impact habitat quality by changing the native plant community, plant production, plant diversity, and ecological health. The incremental impacts should be minimal as BLM uses S&Gs in livestock grazing management, monitors hunters and recreationists for land abuse, uses fire suppression will mitigate the severity of its impacts, and uses BMPs for new oil, gas and ROWs.

Alternative II-No Grazing Alternative

If grazing is removed from the allotment, there will be “*no effect*” on Special Status Species or Migratory Birds because its habitat is not affected.

Cumulative Incremental Effect from the No Grazing Alternative on Special Status Species and Migratory Birds: Reduced surface disturbance would occur with the removal of grazing. The incremental impacts would be less than those expected under the proposed action.

4.1.6.2 Candidate Species – Greater Sage-Grouse (GSG)

Alternative I-Proposed Action/No Action Alternative

The proposed action will impact GSG habitat. Livestock grazing can benefit or degrade GSG habitat on the allotment, depending on the timing, stocking rate, and habitat affected. Fall grazing may favor upland forb production, and spring grazing may be used to remove herbaceous cover and make forbs more accessible (Smith, Malechek, & Fulgham, 1979), (Fulgham, Smith, & Malechek, 1982)). Spring and early summer grazing may help control invasive weeds and remove woody plants, thereby decreasing the risk of wildfire that could remove large areas of habitat (Mosley, 1996), (Olson & Wallander, 2001), (Merritt, Prosser, Sedivec, & Bangsund, 2001), (Riggs & Urness, 1989)).

Excessive or poorly managed grazing causes degradation of sagebrush ecosystems and thus GSG habitat (Bureau of Land Management, 2002). Inappropriate grazing management in uplands can reduce perennial grasses and forbs while favoring annual grasses and increasing sagebrush cover (Branson, 1985), (Tisdale, 1994), (Beck & Mitchell, 2000), (Bork, West, & Walker, 1998)). This may impact GSG, because they rely on perennial grasses for escape cover and residual herbaceous cover for screening cover in nesting habitat. Forbs are positively associated with survival and recruitment of GSG chicks. Inappropriate grazing that damages meadows and riparian areas can harm GSG, because these areas are critical for GSG in late summer. Livestock may trample GSG nests or cause GSG to abandon their nests (Call, 1979), (Patterson, 1952)).

Livestock grazing has occurred historically on these allotments and the BLM expects no additional impacts, other than those that have already taken place as a result of long-term use, from implementation of the proposed action. Continuing to manage for the Wyoming Standards for Rangeland Health will promote GSG habitat viability.

Because staffing and workload issues limit S&G assessment on “C” category allotments, BLM did not assess S&Gs on the 6 Allotments. BLM derived the average stocking rate of 878 acres per AUM on the 6 allotments from the production potential of the land based on topographic features, soil types, vegetative characteristics, and annual precipitation. See Table 1 above.

Livestock stocking rates in the BFO are designed to meet the 6 standards for healthy public rangelands; see Section 1.4.1. Particularly applicable to GSG is Standard 4, which requires that rangelands be capable of sustaining viable populations and a diversity of native plant and animal species. Continuing to manage for the Wyoming Standards for Rangeland Health will promote GSG habitat viability.

Cumulative Incremental Effect from the Proposal: Incremental impacts from the proposed action when added to the past, present and reasonably foreseeable action may result in habitat alteration of GSG.

These impacts include loss of forage, cover, and habitat. The actions may also disturb mating and brood rearing that is vital to any special status species known to occur in the area. Loss of vegetation would occur from livestock grazing, new roads (recreation/hunting/oil and gas/ROWs), and wild fire. Habitat fragmentation would result from vertical intrusions associated with development and new roads associated with oil, gas, ROWs, and recreation activities.

The GSG population within northeast Wyoming is exhibiting a steady long term downward trend (U.S. Fish and Wildlife Service (USFWS), 2010), (Wyoming Game and Fish Department (WGFD) , 2011a). The figure below illustrates a ten-year cycle of periodic highs and lows. Each subsequent population peak is lower than the previous peak. Long-term harvest trends are similar to that of leks attendance (Wyoming Game and Fish Department(WGFD), 2011b). Habitat fragmentation (resulting from oil and gas development) and West Nile virus are the primary contributors to this decline (Taylor, Naugle, & Mills, 2012), (U.S. Fish and Wildlife Service (USFWS), 2010).

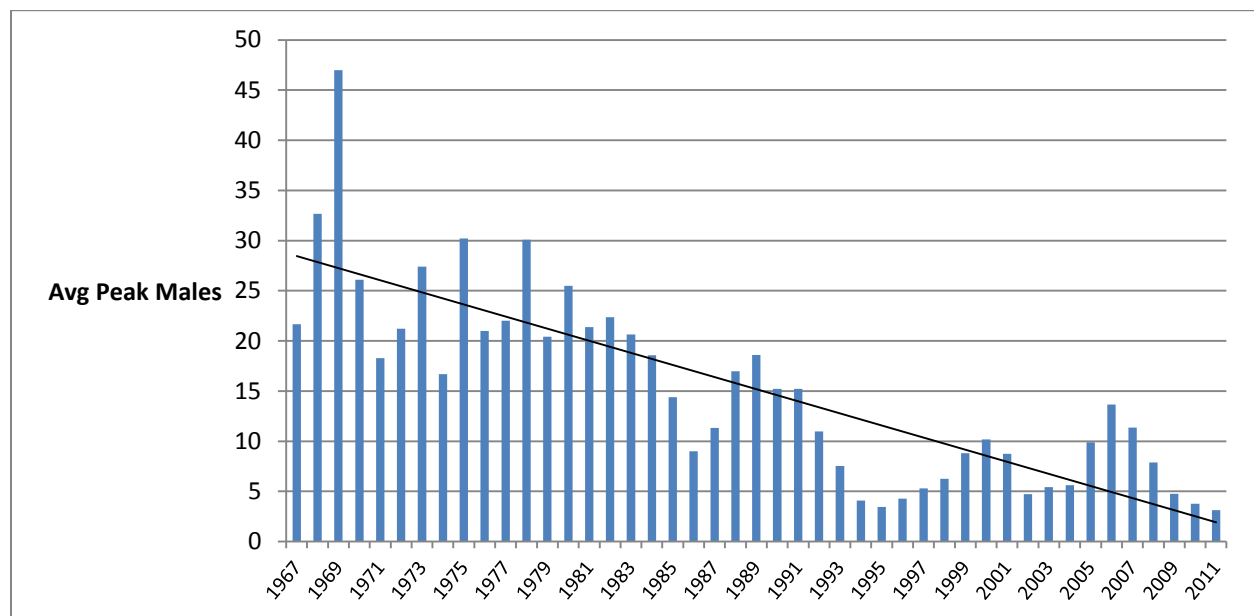


Figure 1. Average peak number of male Greater Sage-Grouse / active leks: BFO 1967-2009

Additionally, the spread of noxious and invasive weeds from the actions may impact habitat quality by changing the native plant community, plant production, plant diversity, and ecological health. The incremental impacts should be minimal as BLM uses Rangeland Health objectives in livestock grazing management, monitors hunters and recreationalist for land abuse, uses fire suppression to mitigate the severity of its impacts, and uses BMPs for new oil, gas and ROWs.

Alternative II-No Grazing Alternative

Under the no grazing alternative, no benefits to GSG habitat as a result of grazing management would occur. Excluding livestock does not necessarily cause an area to return to its pre-grazing ecological condition or guarantee improvements in species richness, diversity, or vegetative production (Manier & Hobbs, 2007). Some habitats reach a threshold where livestock exclusion does not have an effect on the current trend ((Wambolt & Payne, 1986), (Sanders & Both, 1983)). Other research suggests that rest from livestock grazing in Wyoming big sagebrush habitats may improve understory production while decreasing sagebrush cover (Wambolt & Payne, 1986). On Wyoming sites with dense big sagebrush and annual grass understory, eliminating grazing can increase fire risk which results in habitat degradation ((Peters & Bunting, 1994), (West , 1999)).

Alternative II-No Grazing Alternative

Under the no grazing alternative, no benefits to GSG habitat as a result of grazing management would occur. Excluding livestock does not necessarily cause an area to return to its pre-grazing condition or guarantee improvements in species richness, diversity, or vegetation production (Manier & Hobbs, 2007). Some habitats reach a threshold where livestock exclusion does not affect the current trend (Wambolt & Payne, 1986), (Sanders & Both, 1983). Other research shows that rest from grazing in Wyoming big sagebrush habitats may improve understory production while decreasing sagebrush cover (Wambolt & Payne, 1986). On Wyoming big sagebrush sites with dense sagebrush and annual grass understory, eliminating grazing can increase fire risk which results in habitat degradation (Peters & Bunting, 1994), (West, 1999).

Cumulative Incremental Effect from the No Grazing Alternative: Less surface disturbance would occur with grazing's removal. Incremental impacts when compared to the proposal will be less.

4.1.6.3 Big Game

Alternative I-Proposed Action/No Action Alternative

By managing land to meet Rangeland Health Standards and improving overall rangeland condition, forage for deer and pronghorn will improve. Forage resources on winter ranges typically limit mule deer populations (Clements & Young, 1997). Livestock grazing tends to favor shrubs over grasses, and thus may provide more desirable winter browse conditions on the allotments (Austin & Urness, 1998), (Austin, Urness, & Riggs, 1986), (Smith A. D., 1949). Livestock grazing may enhance big game forage by reducing unpalatable standing dead material (Short & Knight, 2003). Big game and cattle may compete for forage on a minor level. There is very little dietary overlap between cattle, pronghorn, and deer during spring and early summer, since cattle feed primarily on grasses while pronghorn and deer select mostly forbs and some grasses. Cattle begin to use more forbs in late summer and fall, potentially increasing competition. Pronghorn and deer increase the amount of shrubs in their diet in fall and winter, thus reducing competition during those seasons (Anderson & McCuiston, 2008). Proper grazing management can improve winter forage conditions for big game (Anderson & Scherzinger, 1975). Livestock grazing historically occurred on these allotments and the BLM expects no additional impacts from implementation of the proposal.

The fences on the allotment pose a hazard to deer and pronghorn. In the BFO resource area, fences have caught and trapped deer and antelope. Modifying fence in areas used by cattle to a more wildlife "safe" design with height under 48 inches and the bottom wire 16 inches from the ground may reduce this hazard. Fences in this allotment are primarily on private land and are not subject to BLM management.

Moderate grazing by sheep in late summer has been shown to have no effect on vegetative composition or production in sagebrush-grass range (Harniss & Wright, 1982). Therefore, BLM expects no impact to pronghorn or deer on the allotments with appropriate sheep management.

[BLM addressed cumulative effects for these alternatives, above, in Special Status (Sensitive) Species and Migratory Birds.]

Alternative II-No Grazing Alternative

Under the no grazing alternative, winter browse conditions for big game would not improve. Encroaching herbaceous species may ultimately out-compete shrub species, resulting in a reduction in quality of big game winter range (Smith A. D., 1949). Additionally, livestock would not remove unpalatable standing dead material, resulting in unimproved forage.

4.1.6.4 Raptors

Alternative I-Proposed Action/No Action Alternative

Results from research and monitoring studies suggest that livestock grazing is likely to impact some species of raptors while favoring others (Bock, Saab, Rich, & Dobkin, 1993). Livestock grazing may cause the direct impacts of nest and egg destruction of ground-nesting species due to trampling by livestock, or nest abandonment by birds intolerant of disturbance. Grazing management practices can change vegetation composition, leading to the indirect impacts of changing prey composition and availability. Continued livestock grazing will favor those species that benefit from the alterations in habitat that occur in response to grazing (Bock, Saab, Rich, & Dobkin, 1993). A recent study to assess the impacts of rotational cattle grazing on rodents and raptors suggests that raptor use and prey availability can be affected by livestock grazing. In comparisons between grazed and ungrazed areas, raptor use declined by 15% in the grazed area, but increased by 63% on the ungrazed area. Rodent abundance declined and remained lower in the grazed area for the duration of the study (Johnson & Horn, 2008).

Table 6 has grassland and shrub-steppe dependent raptor species not discussed elsewhere in this EA that Bock, et al. (1993), reported as positively or negatively impacted by livestock grazing.

Table 6. Grassland and Shrub-Steppe Raptor Species Impacted by Livestock Grazing

Response	Species	Habitat
Negative	Northern harrier	Grassland, Shrub-steppe
	Red-tailed hawk	Shrub-steppe
	Short-eared owl	Grassland, Shrub-steppe
	Swainson's hawk	Shrub-steppe
Positive	Golden eagle	Shrub-steppe

Livestock grazing historically occurred on this allotment and the BLM expects no additional impacts, other than those that occurred as a result of long-term use, from implementation of the proposal. Good grazing management could maintain or improve nesting habitats for ground-nesting raptor species, improve prey abundance, and availability by enhancing habitat conditions.

[BLM addressed cumulative effects for these alternatives, above, in Special Status (Sensitive) Species and Migratory Birds.]

Alternative II-No Grazing Alternative

Under the no-grazing alternative, occasional trampling of nests by livestock would not occur. Livestock grazing would not alter habitats, thus benefitting some raptor species while negatively affecting others (Bock, Saab, Rich, & Dobkin, 1993).

4.1.7 Cultural, Historic Values & National Register of Historic Places (NRHP) Eligibility

Alternative I-Proposed Action/No Action Alternative

Any activity that removes vegetation or leads to soil erosion can cause impacts to cultural resources. Livestock concentration areas (such as those that form near water sources, supplemental feeding areas, fence corners, etc.) and livestock trail formation may result in impacts to cultural resources. According to the State Protocol Agreement between the Wyoming BLM and the Wyoming SHPO, grazing lease renewals that do not include seasonal grazing changes or changes in livestock types are exempt from case-by-case review. As per Appendix B item #27 and following section IV(A)(3) of the Wyoming State Protocol, on March 28, 2014, the Bureau electronically notified the Wyoming State Historic Preservation Office (SHPO) of this grazing lease renewal.

Cumulative Incremental Effect from the Proposal: No new effects are anticipated.

Alternative II-No Grazing Alternative

The absence of grazing will not result in impacts to cultural resources.

Cumulative Incremental Effect from the No Grazing Alternative: Reduced surface disturbance would occur with the removal of grazing. The incremental impacts would be less than those expected under the proposed action.

4.1.8 Socioeconomics

Alternative I-Proposed Action/No Action Alternative

The proposed action would allow the grazing lessees to continue their ranch operations. They will continue to contribute to the state economy, benefiting Wyoming, Johnson County and local governments. The federal government would continue to collect grazing fees from the lessees and this use would continue to generate revenue for the Wyoming state government and provide funds for the BLM to construct range improvement projects.

The CEAA for socioeconomics includes the Wyoming economy and BLM revenue. The direct impacts are anticipated to last for the life of the grazing lease (10 years), while the indirect and long term impacts may last longer.

Cumulative Incremental Effect from the Proposal: The most significant incremental impact to socioeconomics would be the continued revenue generated from grazing receipts and other permitted actions.

Alternative II-No Grazing Alternative

The removal of grazing would increase financial stress on both the BLM and adjacent landowners as the federal land would have to be fenced off from private land to ensure no unauthorized grazing occurs on federal land. The landowners rely on the public lands for their livestock operation; the removal of federal grazing would mean they would need to adjust their operating plan, either through sale of livestock or renting expensive private grazing lands.

Cumulative Incremental Effect from the No Grazing Alternative: The loss of livestock grazing would reduce the income generated from permitted activities on BLM lands. This would impact the Wyoming economy negatively, as livestock grazing and the funds it generates are a large part of the Wyoming economy.

4.2 Cumulative Effects Summary

Cumulative effects are “the impact[s] on the environment which result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such actions” (40 CFR 1508.7). BLM anticipates that implementation of any of the alternatives in combination with the past, present and reasonably foreseeable actions would not result in any measurable cumulative impacts.

Past, Present, and Reasonably Foreseeable Actions

Past, present and reasonably foreseeable actions in all CEAs that may contribute to cumulative effects on various resources include livestock grazing, hunting, recreational activities, fire, oil/ gas activities, and ROWs. The results of the impacts of past and present actions are described in Sections 3 and 4 above. Livestock grazing has occurred in the area for over 100 years. Approximately 238 total AUMs are authorized annually on these allotments. BLM anticipates no changes to authorized AUMs, season of use, and kind/number of livestock in the allotments. Livestock grazing will likely continue unless resources conditions or rangeland health assessments indicate otherwise. Additional activities associated with livestock grazing include: off-high way vehicle (OHV) travel, feeding of mineral and protein supplements, and hauling and trailing livestock. Hunting and recreational activities have occurred in the

allotments for many years and are still a significant area land use. BLM expects these land uses to continue, with no material changes in these uses.

Fire has occurred in the area over many years. Fire regime is the role fire plays across the land scape. The project area is in a Fire Regime Class II and IV, in which the fire frequency is high severity (stand replacement of greater than 75% of the dominant overstory vegetation being replaced). The fire regime condition classes (FRCC) indicate how similar a landscape is to its natural or historical regime. The project area is in the FRCC of 2 which defines the area as having similar key ecosystem components to its historic state, including vegetation and disturbances such as fire. Wildfires are likely to occur in future.

The BLM permits federal mineral development (coalbed natural gas, conventional oil, and coal) in the Powder River Basin (PRB). This includes federal minerals below federal and/or private (split estate) surface. The BLM prepares NEPA analyses prior to federal mineral development. Generally, companies submit proposals, often as plans of development (PODs) consisting of 1 to 200 wells. Mineral development is common in the area and numerous PODs are present. Although permitting of oil and gas wells has decreased in the PRB, it is likely this activity will continue. Currently there are no PODs within any of the allotments. Rights-of-way (ROWs) exist in the allotments and more be approved in the future. These ROWs may include water pipelines, power lines, roads, and other federal ROWs. Maintenance and construction of these ROWs will create some surface disturbance that would contribute to the cumulative impacts on various resources.

4.3. Mitigation/Residual Impacts/Monitoring Summary

BLM does not require additional mitigation measures for this proposed action. The BLM incorporated all measures needed to mitigate the proposals' impacts as design features. BLM analyzed the impacts of any mitigation measures in Section 4, above. Per 40 CFR 1505.2(c), monitoring to ensure the success of the proposed action and any design/mitigation features will occur. This monitoring will follow BLM policy and management guidelines that may include use supervisions and trend monitoring when time and priorities permit.

5.0 TRIBES, INDIVIDUALS, ORGANIZATIONS, or AGENCIES CONSULTED

Milton Moffett Ranch	Lessee, Claypit Allotment	Raymond and Joyce Taylor	Lessee, E.K. Mountain Allotment
Kaycee Land and Livestock	Lessee, Flynn Draw Allotment	William and Bonnie Ross	Lessee, Keyes Draw Allotment
Cydney Long and Stuart Gosney	Lessee, School Section Draw	Milton Moffett	Lessee, Trough Draw
Wyoming State Agencies			

6.0 LIST OF PREPARERS

Dustin Kavitz, Rangeland Management Specialist, BLM, Buffalo Field Office

6.1 List of Reviewers

Name	Title	Duty	Name	Title	Duty
Kay Medders	Range Management	Range, Soils	Jim Verplanke	Wildlife Biologist	Wildlife
Ardeth Hahn	Archeologist	Cultural Resources	Charlotte Darling	Range Management	Vegetation, Soils

Chris Durham	Asst. Field Manager	Resources	John Kelley	Coordinator	NEPA Planning
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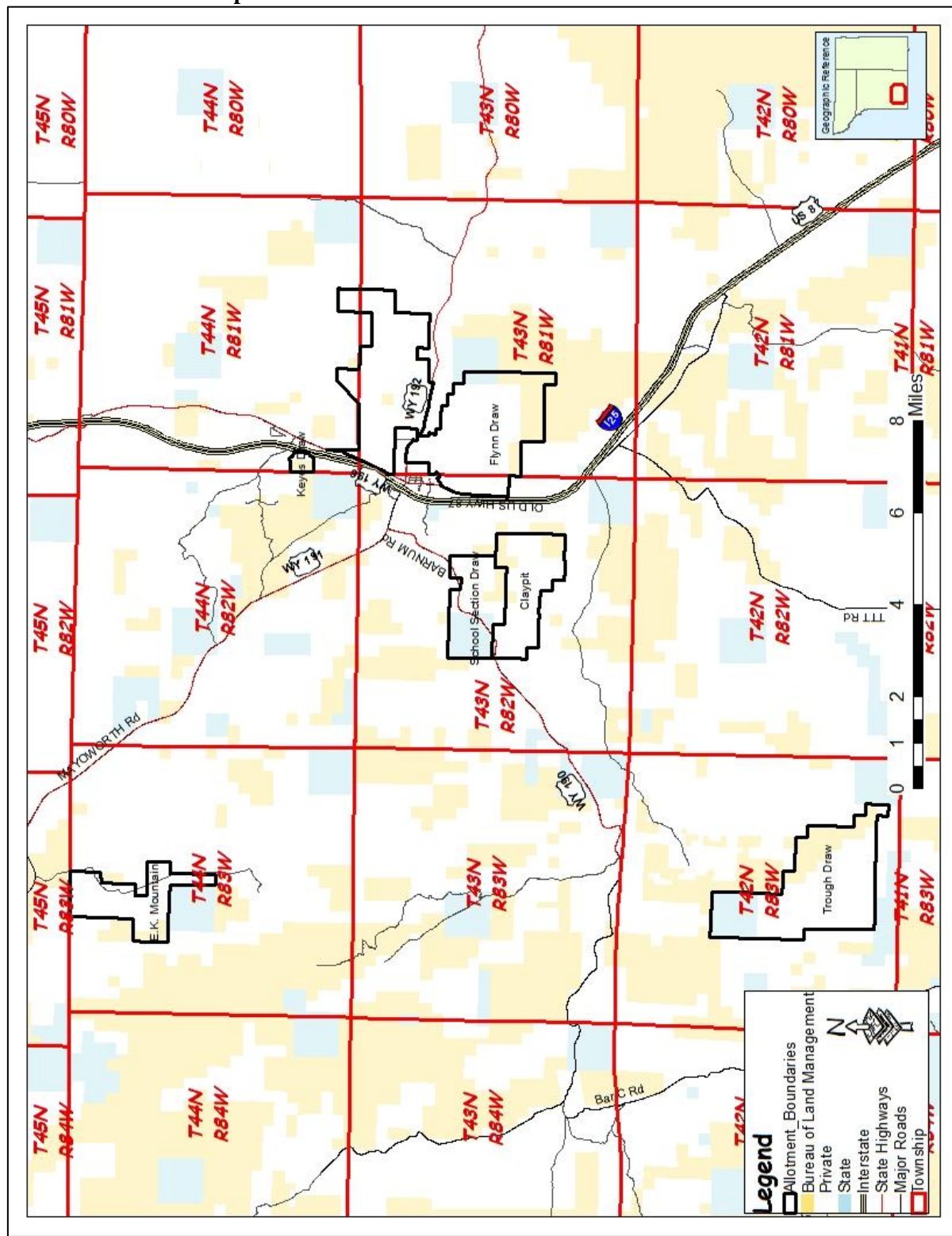
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8.0 Attachment 1. Map 1



9.0 Appendix 1. Tables.

Table A.1. Summary of Threatened and Endangered Species Habitat and Project Effects

Common Name (scientific name)	Habitat	Presence	Project Effects	Rationale
<i>Threatened</i>				
Ute ladies'-tresses orchid	Riparian areas with permanent water	NP	NE	Habitat is not present; speed source is not suspected in the area.
<i>Proposed</i>				
Northern Long-eared Bat	Conifer and deciduous forest, caves and mines	NP	NE	The project area is outside the species' range, and the species is not expected to occur. Only known to occur in extreme Northeast WY (mainly Crook and Weston counties, very limited in northern Campbell county.)
<i>Candidate</i>				
Greater Sage-grouse	Basin-prairie shrub, mountain-foothill shrub	K	WIPV	Suitable nesting and brood rearing habitat is present and the project will negatively affect sage-grouse.
Project Effects LAA - Likely to adversely affect NE - No Effect NLAA - May Affect, not likely to adversely affect individuals or habitat.		NLJ – Not likely to jeopardize the continued existence of the species MIH – May impact individuals and habitat NP - Habitat not present and species unlikely to occur within the project area. WIPV - Will Impact Individuals or Habitat with a consequence that the action may contribute to a trend towards Federal listing or cause a loss of viability to the population or species.		

Table A.2. Summary of Sensitive Species Habitat and Project Effects.

Common Name (scientific name)	Habitat	Presence	Project Effects	Rationale
<i>Amphibians</i>				
Northern leopard frog (<i>Rana pipiens</i>)	Beaver ponds and cattail marshes from plains to montane zones.	S	MIH	Habitat present but will not be impacted.
Columbia spotted frog (<i>Rana pretiosa</i>)	Ponds, sloughs, small streams, and cattails in foothills and montane zones. Confined to headwaters of the S Tongue R drainage and tributaries.	NP	NI	The project area is outside the species' range, and the species is not expected to occur .
<i>Fish</i>				
Yellowstone cutthroat trout (<i>Oncorhynchus clarki bouvieri</i>)	Cold-water rivers, creeks, beaver ponds, and large lakes in the Upper Tongue sub-watershed	NP	NI	The project area is outside the species' range, and the species is not expected to occur.
<i>Birds</i>				

Common Name (scientific name)	Habitat	Presence	Project Effects	Rationale
Baird's sparrow (<i>Ammodramus bairdii</i>)	Shortgrass prairie and basin-prairie shrubland habitats; plowed and stubble fields; grazed pastures; dry lakebeds; and other sparse, bare, dry ground.	NS	MIIH	Habitat present.
Bald eagle (<i>Haliaeetus leucocephalus</i>)	Mature forest cover often within one mile of large water body with reliable prey source nearby.	S	MIIH	Habitat present. Suitable nesting, roosting and foraging habitat is present.
Brewer's sparrow (<i>Spizella breweri</i>)	Sagebrush shrubland	S	MIIH	Suitable nesting and brood rearing habitat is present.
Ferruginous hawk (<i>Buteo regalis</i>)	Basin-prairie shrub, grasslands, rock outcrops	S	MIIH	No documented nests occur within the allotments. Suitable nesting and foraging habitat is present.
Loggerhead shrike (<i>Lanius ludovicianus</i>)	Basin-prairie shrub, mountain-foothill shrub	NS	MIIH	Some mountain-foothill shrub adjacent to project location.
Long-billed curlew (<i>Numenius americanus</i>)	Grasslands, plains, foothills, wet meadows	NP	MIIH	Habitat not present.
Mountain Plover (<i>Charadrius montanus</i>)	Short-grass prairie with slopes < 5%	NP	MIIH	Habitat not present
Northern goshawk (<i>Accipiter gentilis</i>)	Conifer and deciduous forests	NP	NI	Habitat not present.
Peregrine falcon (<i>Falco peregrinus</i>)	Cliffs	NP	NI	Habitat not present.
Sage sparrow (<i>Amphispiza billneata</i>)	Basin-prairie shrub, mountain-foothill shrub	NP	NI	Habitat not present.
Sage thrasher (<i>Oreoscoptes montanus</i>)	Basin-prairie shrub, mountain-foothill shrub	NP	NI	Habitat not present.
Trumpeter swan (<i>Cygnus buccinator</i>)	Lakes, ponds, rivers	NP	NI	Habitat not present.
Western Burrowing owl (<i>Athene cunicularia</i>)	Grasslands, basin-prairie shrub	S	MIIH	Habitat present.
White-faced ibis (<i>Plegadis chihi</i>)	Marshes, wet meadows	NP	NI	Habitat not present.

Common Name (scientific name)	Habitat	Presence	Project Effects	Rationale
Yellow-billed cuckoo (<i>Coccyzus americanus</i>)	Open woodlands, streamside willow and alder groves	NP	NI	Habitat not present.
<i>Mammals</i>				
Black-tailed prairie dog (<i>Cynomys ludovicianus</i>)	Prairie habitats with deep, firm soils and slopes less than 10 degrees.	S	MIIH	Known colonies present.
Fringed myotis (<i>Myotis thysanodes</i>)	Conifer forests, woodland chaparral, caves and mines	NP	NI	Suitable roosting habitat not present. Foraging individuals may be impacted by dust, noise, human activities, or habitat loss. Mitigation excluding birds and bats from production facilities will reduce mortality risk.
Long-eared myotis (<i>Myotis evotis</i>)	Conifer and deciduous forest, caves and mines	NP	NI	Construction may impact foraging areas and alter habitat conditions.
Spotted Bat (<i>Euderma maculatum</i>)	Prominent rock features in extreme, low desert habitats to high elevation forests.	NP	NI	Habitat not present.
Swift fox (<i>Vulpes velox</i>)	Grasslands	NP	NI	Habitat not present.
Townsend's big-eared bat (<i>Corynorhinus townsendii</i>)	Caves and mines.	NP	NI	Habitat not present.
<i>Plants</i>				
Limber Pine (<i>Pinus flexilis</i>)	Mountains, associated with high elevation conifer species	NP	NI	Habitat not present.
Porter's sagebrush (<i>Artemisia porteri</i>)	Sparsely vegetated badlands of ashy or tufaceous mudstone and clay slopes 5300-6500 ft.	NP	NI	Habitat not present.
William's wafer parsnip (<i>Cymopterus williamsii</i>)	Open ridgetops and upper slopes with exposed limestone outcrops or rockslides, 6000-8300 ft.	NP	NI	Project area outside of species' range.

Common Name (scientific name)	Habitat	Presence	Project Effects	Rationale
Presence K - Known, documented observation within project area. S - Habitat suitable and species suspected, to occur within the project area. NS - Habitat suitable but species is not suspected to occur within the project area. NP - Habitat not present and species unlikely to occur within the project area.		Project Effects NI - No Impact. MIH - May Impact Individuals or Habitat, but will not likely contribute to a trend towards Federal listing or a loss of viability to the population or species. WIPV - Will Impact Individuals or Habitat with a consequence that the action may contribute to a trend towards Federal listing or cause a loss of viability to the population or species. BI - Beneficial Impact		